ing of pride, and stimulate us to seek new truths to incorporate in the service we may render. The place of neuropsychiatry in medicine will not be jeopardized if we use intelligently all the resources at our command, and diligently seek new fields of usefulness.

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BAD ANESTHETIC RISKS—THEIR MANAGEMENT*

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WITH the proper selection of anesthetic agents, and their scientific administration, there should be little need for a paper dealing with bad anesthetic risks. There are very few patients who cannot take a properly selected anesthetic, carefully administered. This conclusion has been drawn after the review of some fourteen thousand anesthesias.

In the various types of bad anesthetic risks, their management depends on the selection of the proper anesthetic agent, and the choice of the different methods of administration suitable to the case, as well as on preliminary and postoperative treatment.

CARDIAC RISKS

Cardiac cases may or may not be bad risks. A simple heart murmur, without symptoms of decompensation, dyspnea, cough, edema or pain on exertion, with a normal electrocardiogram, should give no trouble under ordinary operative and anesthetic management.

Hypertension without symptoms, and which responds to treatment, should be disregarded. However, if hypertension is associated with substernal pain, or precardial distress, increased by exertion, nervous strain, or after a heavy meal, an electrocardiogram should be taken, and a guarded prognosis given in all operative procedures.

The blood pressure should be frequently checked during the operation, and the excitement stage prevented as much as possible by preliminary sedatives, and a quick induction. In prolonged operation a sudden drop in blood pressure calls for increase in oxygen percentage, and atropin to prevent pulmonary edema.

Cases with an electrocardiogram showing abnormal changes in the R. T. interval, associated with precardial distress, or substernal pain, with or without nausea, and these symptoms intensified by effort, require extreme caution in anesthetic management. These are the signs and symptoms of coronary sclerosis and an attack of coronary occlusion, and sudden death may occur at any time. Not long ago the author was called to an adjoining operating room, where a colleague had such a patient who died suddenly, during a tonsillectomy, before the first tonsil was removed. The patient had previously complained of precordial distress and orthopnea.

Myocardial damaged cases with inverted, diphasic, or low amplitude T-waves, in either the first or second leads of the electrocardiogram, especially if associated with hypotension, and symptoms of decompensation, dyspnea on exertion, cough or edema require extreme caution. Preliminary treatment with rest, and digitalis, before the operation, if possible, is important. During the operation frequent blood pressure, pulse and respiration records should be taken, also supportive treatment given with caffein, atropin, glucose subcutaneously, or blood transfusions in hemorrhage cases. Here I wish to register against large quantities of glucose, or normal salt solution, intravenously in heart cases; one in so doing may embarrass an already overworked heart. It is better to give these solutions subcutaneously, for then they will be absorbed slowly as needed.

Auricular fibrillation patients should, of course, be well digitalized, if time permits, before attempting any operation. Patients with any form of heart-block, as shown by the electrocardiogram, require special treatment: as with thyroid extract, if associated with low basal metabolism rate; caffein in complete heart-block; and the nitrites or similar vasodilators, if associated with hypertension.

RESPIRATORY RISKS

Mechanical obstructions of the upper air passages by foreign bodies sometimes test one's ingenuity to the limit. In these cases, one should be prepared to give anesthesia under pressure, and sometimes it may be necessary to do a tracheotomy, below the site of the obstruction, if it is possible to do so. I recall a case many years ago where a child had swallowed a jack, which became lodged in the upper part of the esophagus. This was before the modern anesthetic machines were devised, and it was necessary to give ether by the drop method. The jack was located by means of the esophagoscope; but while the operator was attempting to remove it the instrument slipped off the jack at a critical moment and the trachea was completely closed. The child died from asphyxiation, even though a tracheotomy was done. At the present time gas under pressure, or by the endotracheal method, might have prevented this fatality.

In thoracoplasties, where collapse of the chest wall becomes necessary for the treatment of tuberculosis, lung cavities or abscesses, it is important

* Chairman's address, Anesthesiology Section of the California Medical Association, at the sixty-third annual session, Riverside, April 30 to May 3, 1934.

that a complete cardiac examination be made, including an electrocardiogram. This is essential because of the damage to the myocardium, which often occurs in these cases, following prolonged infection.

If the myocardium is seriously damaged, as shown by the inverted, diphasic, or low amplitude of the T-waves in the first or second leads of the electrocardiogram, rest and digitalis often improve this condition. By careful management of these cases during the operation, using as high a percentage of oxygen as possible to produce sufficient relaxation, shock may usually be prevented. It is important in these cases to watch the pulse, respiration and blood pressure very carefully. The blood pressure is usually raised about 10 millimeters of mercury, at the induction of the anesthesia, and this reading is generally maintained until evidence of shock appears, when the blood pressure begins to drop. This is the time to advise the operator to terminate the resection of the ribs and suture the wound. If everything has gone well, from two to four large sections of ribs may safely be removed at each stage.

In thoracoplasties, position on the table is very important. The patient should be placed on the well side, with the legs acutely flexed at the hips and knees, and secured by means of a strap below the knees, and an adhesive strip two and one-half inches wide and long enough to extend over the upper hip, being firmly fastened on either side of the table to prevent rolling of the patient. A large sand bag (14 x 8 x 4 inches) is placed against the chest, extending from the thigh to the axilla, so as to hold the chest firmly in a position—comfortable for the patient and convenient for the operator. It is very important for the patient to be comfortable, so as to interfere as little as possible with respiration. Have the patient cough and expectorate as much as possible before the anesthetic is started; this will give better respiratory excursion and a smoother induction.

The upper stage of thoracoplasties—the resection of the first, second and third ribs, especially in left-sided operations—is the stage which usually gives the greatest degree of shock. This is due to the fact that there is quite a maladjustment of the mediastinum, curving of the trachea, and displacement of the heart due to adhesions. When these upper ribs are resected, there is a sudden readjustment of the mediastinum, at which time I have seen the patient immediately go into shock, with rapid, feeble pulse, sudden drop in blood pressure, and sometimes the appearance of pulmonary edema. This condition requires quick action, with increase of oxygen percentage, atropin sulphate or caffein—sodium benzoate per hypo, and rapid closure of the chest wall. In case of hemorrhage, which sometimes occurs at this stage, glucose subcutaneously and blood transfusions may be necessary.

RENAL RISKS

Nephritics do well under gas anesthesia. There should be no complications in any operation, on any part of the renal system, under gas anesthesia properly administered. Nephrectomies, removal of calculi, cystoscopies and prostatectomies in most cases occur in middle age or elderly persons, and they all respond well to nitrous oxid or ethelene. These cases are sometimes complicated with cardiac conditions and should be so treated.

THYROID RISKS

Thyroidectomies should have preliminary treatment with sedatives, barbiturates, iodin, digitalis, and rest according to the basal metabolism rate, and amount of cardiac damage. These cases respond well to nitrous oxid anesthesia or local, as the individual operator prefers.

The possibility of mechanical obstruction of the upper respiratory tract, due to sudden collapse of the trachea, during certain types of goiter operations, must not be overlooked. We had one such case in Pasadena, during an operation for thyroidectomy, in which respiration was only maintained by oxygen under pressure, until tracheotomy was done to relieve a compression on the trachea. Anesthesia was then easily maintained through the tracheotomy tube, and the operation completed without further interruption. The patient made an uneventful recovery. Had we anticipated this condition, the difficulty could have been avoided by endotracheal anesthesia or by preliminary tracheotomy.

GASTRO-INTESTINAL RISKS

Gastro-intestinal surgery, carcinoma, perforated ulcer, intestinal obstructions, and gall-bladder surgery in most cases, require a small amount of ether in the gas anesthetic mixture, in order to get sufficient relaxation. In obstruction cases, it is good technique to routinely do gastric lavage before anesthesia. Fecal vomiting, or any form of vomiting, is not only annoying both to the anesthetist and operator, but also dangerous to the patient.

INJURIES

Head injuries, concussions, skull fractures with hemorrhage, usually require very little anesthesia and the treatment is for the most part that for shock.

ANEMIAS

Primary and secondary anemias require light anesthesia and high percentage of oxygen, and are not injured by gas anesthetics. Local or spinal anesthesia in these cases lowers resistance and may induce shock.

DIABETIC RISKS

Diabetic patients should be carefully checked for acidosis before operated, and blood sugar determinations obtained for their proper management. These cases should in no wise have ether, which increases acidosis. Gas with sufficient oxygen is the anesthetic par excellence in these cases.

The most thrilling experience we have had, as an anesthetist, occurred a few days ago, when Dr. E. B. Dewey and the author were called to the Woman's Hospital to see a six-day-old baby. Ever since birth, it was necessary to administer

oxygen to the infant almost continuously on account of dyspnea and cyanosis. The baby's heart was good, and a flat x-ray plate was taken of the chest and abdomen. The radiologist at the Pasadena Hospital, Dr. John Chapman, made a diagnosis of diaphragmatic hernia. He confirmed his diagnosis with a barium meal with x-ray showing all of the small intestines and most of the large intestine in the right chest, completely collapsing the right lung, partially compressing the left lung and crowding the heart over to the left. The child's condition was so desperate that after consultation, it was decided, in order to save the baby's life, it would be necessary to operate immediately.

After obtaining the parents' consent, the baby was taken to the operating room and placed on the operating table. Having been laid on the left side, the position necessary for the operation, it collapsed and was resuscitated by means of carbogen under pressure. The heart action continued good, and an operation being the only chance the baby had, the operator was advised to proceed.

Through artificial respiration inflating the left lung by means of the McKesson machine, using 95 per cent oxygen and 5 per cent carbon dioxid intermittently, about five or six times per minute, the baby was kept alive, but without respiratory movements. The first incision was effected through the right pleura, and an attempt made to replace the intestines. Since this was impossible, an abdominal incision was made, and with difficulty the intestine was pulled down into the abdominal cavity. The hernia being thus reduced, the opening, 6 centimeters in length in the diaphragm, was closed with four mattress sutures. After the hernia was closed, it was possible to inflate both lungs and the baby's condition improved. The operation lasted over an hour, and the only anesthetic used was 95 per cent oxygen and 5 per cent carbon dioxid until the last five minutes, when the skin sutures were being placed. The baby was limp and perfectly relaxed, life being maintained by periodically inflating the chest with carbogen. While applying the skin sutures, anesthesia was obtained by giving 50 per cent carbogen and 50 per cent nitrous oxid. At the close of the operation, breathing was regular, the normal pink color was restored, and the baby returned to the nursery in good condition. Six days later an x-ray showed the chest naturally expanded, and the intestines normally placed in the abdominal cavity.

CONCLUSIONS

1. In order to render the best possible service to the patient and the greatest assistance to the operator, in bad anesthetic risks it is necessary that a complete medical and surgical diagnosis be made prior to the operation.

2. The anesthetist must not only be trained in the mechanics of anesthesia, but must also be prepared to advise the surgeon as to the patient's condition at all times, and to anticipate complications in time to meet them.

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DIAGNOSIS VERSUS TREATMENT*

WITH REFERENCE TO DERMATOLOGY

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IN all branches of medicine we are confronted with the importance of diagnosis as contrasted with method of treatment. It is true that the patient consults the doctor, as my former chief, Dr. Fordyce, often said, not to be handed a long Latin name which he cannot understand, but for relief of his complaint. In order that the physician may be able to give relief by intelligent treatment, he must not only be a good therapist, but a competent diagnostician. This is as true in the realm of skin diseases and syphilis as in any other field of medicine. We, who limit our endeavor to the diagnosis and treatment of skin diseases and syphilis, believe that a great many practitioners, without any attempt at diagnosis, divide skin lesions into two classes—those to which they apply calamin lotion, and those to which they apply zinc oxid ointment. And yet they claim to be physicians.

The difference between a regular physician and the cultist is in the scientific approach of the former, by reason of his knowledge of the fundamental sciences and his training in making a diagnosis. The physician who, without attempting to make a diagnosis other than skin-rash or eczema, prescribes calamin lotion or zinc oxid ointment, becomes a cultist in practice if not in name. He brings discredit upon himself, and adds to the ever-growing lack of confidence of the masses in the noble profession of the healing art. His action often serves to turn the patient from the regular physician to the cultist. Is it any wonder that the various cults thrive?

INCORRECT DIAGNOSIS

It is not uncommon in these days for the general practitioner to suspect allergy in every type of generalized itching dermatosis. So-called allergy is considered the basis of every itching-skin eruption. The morphology of the individual lesion, and the distribution of the various lesions and their possible relationship to some systemic disturbance, is entirely disregarded. It is quite the rule, then, to refer the patient who complains of itching to the allergist who, of course, is not in position to give a competent opinion. After his numerous scratch and intradermal tests prove to be negative or positive, he is at sea as to further procedure in reaching a proper diagnosis. Hopkins recently again has pointed out the importance of physical disturbance, rather than food or protein allergy in chronic urticaria. Clinical interpretation often is more valuable than laboratory methods, especially skin tests, in a great many generalized itching dermatoses.

Moses Scholtz recently called attention to a patient who was studied for weeks, with all kinds of scratch tests and intradermal tests, when a

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